

**Towards improving maternity care for women with vasa
praevia: A mixed methods study**

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degree of Doctor of Philosophy

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Nasrin Zamani Javid declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Health at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

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Statement of contribution	Percentage of contribution
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ABBREVIATIONS

ACM	Australian College of Midwives
ACNM	American College of Nurse-Midwives
ACOG	American College of Obstetricians and Gynecologists
ACR	American College of Radiology
AIUM	American Institute of Ultrasound in Medicine
ALSO	Advanced Life Support in Obstetrics
AMOSS	Australasian Maternity Outcomes Surveillance System
ANZ	Australia and New Zealand
ARM	Artificial Rupture of Membranes
ASUM	Australasian Society for Ultrasound in Medicine
CAM	Canadian Association of Midwives
CMFM	Certification in Maternal Fetal Medicine
COGU	Certification in Obstetrical and Gynaecological Ultrasound
CS	Caesarean Section
CTG	Cardiotocography
FIGO	International Federation of Gynecology and Obstetrics
GP	General Practitioner
HREC	Human Research Ethics Committee
ISUOG	International Society of Ultrasound in Obstetrics and Gynecology

IVF	In-Vitro Fertilisation
MFM	Maternal Fetal Medicine
NICU	Neonatal Intensive Care Unit
NICE	National Institute of Clinical Excellence
NZCOM	New Zealand College of Midwives
NZGC	New Zealand Guidelines Group
PSANZ	Perinatal Society of Australia and New Zealand
PTSD	Post Traumatic Stress Disorder
RADICAL	Raise Awareness, Design for safety, Involve users, Collect and Analyse patient safety data, and Learn from patient safety incidents
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RCM	Royal College of Midwives
RCT	Randomised Controlled Trial
RCOG	Royal College of Obstetricians and Gynaecologists (UK)
SMFM	Society for Maternal-Fetal Medicine (USA)
SOGC	Society of Obstetricians and Gynaecologists of Canada
SRU	Society of Radiologists in Ultrasound
UK	United Kingdom
USA	United States of America
VP	Vasa Praevia

ABSTRACT

Introduction

Vasa praevia is one of the causes of perinatal mortality and morbidity. In 2012, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists issued the first national guidance on vasa praevia. This statement recommended screening women who have risk factors for vasa praevia, and early caesarean section for women with an antenatal diagnosis of vasa praevia. These interventions are to improve perinatal outcomes.

The rarity of this condition has been a significant obstacle for health researchers to conduct high-impact quality studies to enable the development of a national clinical guideline. Hence, women with this condition often seem to receive different approaches from care providers, which has been shown to cause stress and worry in some women.

Methods

Utilising a mixed methods design, this thesis aimed to investigate the views of midwives and obstetricians regarding antenatal diagnosis of vasa praevia, describe the impact of perinatal deaths due to vasa praevia on these clinicians, and identify the actions required to improve the capabilities of these professional groups to care for the affected women. Phase one investigated the views and current practice of 453 obstetricians in Australia and New Zealand through a bi-national survey. In Phase two, a descriptive qualitative research, 22 obstetricians and 20 midwives practising across Australia were interviewed to explore the experience of caring for women with vasa praevia.

Results

There was a lack of consensus from obstetricians on the definition of vasa praevia. Despite high acceptability of screening women with risk factors for vasa praevia (70%), there was a low awareness (17%) about the risk factors. The qualitative study identified the devastating impact of adverse perinatal outcomes due to undiagnosed vasa praevia

on the midwives and obstetricians. This was a driving force for antenatal screening and diagnosis. However, lack of knowledge at the clinician level and lack of local policy, information for women and research about vasa praevia at the health system level were the reported barriers to the provision of safe, high-quality care.

Conclusion

The findings establish the need for standardising the process of screening, diagnosis and care of women with vasa praevia. This can be achieved by developing local policies at each ultrasound facility and maternity hospital, educating clinicians, and developing lay information for women affected by this condition. Furthermore, clinicians should be prepared and supported to deal with adverse patient outcomes, and work with families to improve experiences and outcomes.